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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,685	09/25/2003	Gary D. Havey	H16796 CON	8387

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EXAMINER

KOVALICK, VINCENT E

ART UNIT PAPER NUMBER .

2677

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,685

Applicant(s)

HAVEY ET AL.

Examiner

Vincent E. Kovalick

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This Office Action is in response to Applicant's Patent Application, Serial No. 09/165,964, with a File Date of September 25, 2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz (USP 5,305,181) taken with Fan et al. (USP 6,452,572) in view of Schoenbeck et al. (USP 6,227,043).

Relative to claim 19, Schultz **teaches** a wrist mounted terminal with a flexible housing (col. 1, lines 67-68 and col. 2, lines 1-20 and Fig. 34); Schultz further **teaches** a portable electronic video display comprising a housing and a viewing opening, configured to be worn on an operator's wrist; with a display mounted in the housing (col. 6, lines 45-66 and Fig. 34).

Schultz **does not teach** said viewing opening comprising an eyepiece configured such that an eye region of the operator may be placed proximate the eyepiece; or an optics assembly coupled to the display and mounted within the housing, the optics assembly for projecting an image generated on the display to the viewing opening; an RF receiver coupled to the display for receiving a signal from a source and inputting the signal to the display thus resulting in the

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generation of the image; and a data input control mounted to the housing and coupled to a transmitter for sending control signal to a stand alone computer.

Fan et al. **teaches** a monocular head-mounted display system (col. 1, lines 49-67; col. 2, lines 1-65 and col. 3, lines 1-40 and Fig. 4); Fan et al. further **teaches** said viewing opening comprising an eyepiece configured such that an eye region of the operator may be placed proximate the eyepiece; and an optics assembly coupled to the display and mounted within the housing, the optics assembly for projecting an image generated on the display to the viewing opening; It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz the feature as taught by Fan et al. in order to provide the flexibility of reverting to a monocular system to expand the variety of applications where the invention can be applied.

Schultz taken with Fan et al. **does not teach** an RF receiver coupled to the display for receiving a signal from a source and inputting the signal to the display thus resulting in the generation of the image; and a data input control mounted to the housing and coupled to a transmitter for sending control signal to a stand alone computer.

Schultz taken with Fan et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means.

Schoenbeck et al. **teaches** a remote portable display unit in communication with a processing unit (col. 1, lines 51-67 and col. 2, lines 1-31 and Fig. 2); Schoenbeck et al. further **teaches** an RF receiver coupled to the display for receiving a signal from a source and inputting the signal to the display thus resulting in the generation of the image; and a data input control mounted to the

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housing and coupled to a transmitter for sending control signal to a stand alone computer (col. 3, lines 42-56 and Fig. 2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. the feature as taught by Schoenbeck et al. in order to provide to the system with the means to transmit and receive data from a remote computer/processor (col. 3, lines 41-56 and Fig. 2).

Regarding claim 22, Schultz taken with Fan et al. in view of Schoenbeck et al. **does not teach** a portable electronic display comprising a power switch coupled to the eyepiece so that power is only delivered to the display when the power switch is engaged; said means being in common practice in the power on/off control of electronic devices.

Because said means is in common practice and well known in the art, it would have been obvious to a person of ordinary skill in the art at the time of the invention, to include in the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. the feature of a power ON/OFF switch convenient to the user to conserve power when the unit is not in use.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. as applied to claim 19 in item 3 hereinabove and further in view of Wong et al. (USP 5,963,192).

Regarding claim 20, Schultz taken with Fan et al. in view of Schoenbeck et al. **does not teach** a portable electronic video display wherein the display comprises an electroluminescent color sequential display.

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Schultz taken with Fan et al. in view of Schoenbeck et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Wong et al. **teaches** a video-graphics controller comprising a color display unit (col. 1, lines 38-67); Wong et al. further **teaches** portable electronic video display wherein the display comprises an electroluminescent color sequential display (col. 1, lines 13-21).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. the feature as taught by Wong et al. in order to provide the means to display video images in color.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view or Wong et al. as applied to claim 20 in item 4 hereinabove and further in view of Kalmanash (USP 4,991,941).

Relative to claim 21, Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view or Wong et al. **does not teach** the portable electronic video display further comprising an LCD color shuttle coupled to the display.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view or Wong et al. teaches . teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Kalmanash **teaches** a method and apparatus for multi-color display devices (col. 2, lines 44-67; col. 3, lines 1-67 and col. 4, lines 1-12); Kalmanash further **teaches** a portable electronic video display further comprising an LCD color shuttle coupled to the display (col. 1, lines 53-66).

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It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Wong et al. the feature as taught by Kalmanash in order to provide the means for controlling the color projected by an image such that the actual color projected is consistent with the color data driving the image.

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. as applied to claim 19 in item 3 hereinabove and further in view of Brooks et al. (USP 5,111,402).

Regarding claim 23, Schultz taken with Fan et al. in view of Schoenbeck et al. **does not teach** a portable electronic video display wherein the source further comprises a stand alone computer remotely linked to the portable electronic video display.

Schultz taken with Fan et al. in view of Schoenbeck et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Brooks et al. **teaches** a remote access terminal which is a potable display and data entry unit (col. 4, lines 60-68 and col. 5, lines 1-10; Brooks further **teaches** portable electronic video display wherein the source further comprises a stand alone computer remotely linked to the portable electronic video display (col. 6, lines 50-68; col. 10, lines 51-68 and col. 6, lines 1-2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. the feature as taught by Brooks et al. in order to provide the means for the remote device to communicate with a central computer.

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7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Brooks et al. as applied to claim 23 in item 6 hereinabove and further in view of Corm et al. (USP 4,169, 245).

Relative to claim 24, Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Brooks et al. **does not teach** said portable electronic video display further comprising a VGA connector of the computer connected to a RF data transmitter, the transmitter comprising an analog to digital converter for converting an analog video signal generated by the computer into a digital signal transmittable by the transmitter.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Brooks et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Crom et al. **teaches** a radio frequency communications system (col. 2, lines 36-62); Crom et al. further **teaches** said portable electronic video display further comprising a VGA connector of the computer connected to a RF data transmitter, the transmitter comprising an analog to digital converter for converting an analog video signal generated by the computer into a digital signal transmittable by the transmitter.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Brooks et al. the feature as taught by Crom et al. in order to provide the means for providing an analog video signal from a computer through a VGA connector of the transmitter device housing a ADC, converting the analog video signal to a digital signal for transmission by the RF transmitter.

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8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Brooks et al. taken with Corm et al. applied to claim 24 in item 7 hereinabove and further in view of Schoenbeck.

Regarding claim 25, Schoenbeck et al. further **teaches** the said portable electronic video display comprising an antenna coupled to the receiver, wherein the digital signal sent by the transmitter is received by the receiver through the antenna and converted into an analog signal and sent to the display (col. 3, lines 42-56 and Fig. 2). It being understood that the transmitted digital signal would be converted to the signal form required to drive the receiving display including a conversion to an analog format.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al. in view of Schoenbeck et al. as applied to claim 19 in item 3 hereinabove and further in view of Kalmanash taken with Wong et al.

Schultz taken with Fan et al. in view of Schoenbeck et al. **does not teach** a color sequential video display also mounted within the housing and coupled to the receiver for displaying a video image of a signal received by the receiver or a LCD color subtractive shutter optically aligned with the video display.

Schultz taken with Fan et al. in view of Schoenbeck et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Wong et al. **teaches** a color sequential video display (col. 1, lines 13-21).

It would have been obvious to a person of ordinary skill in the art at the time of the invention

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to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. the feature as taught by Wong et al. in order to provide the means and gain the benefit from being able to display video images in color.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Wong et al.

does not teach a LCD color subtractive shutter optically aligned with the video display.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Wong et al.

teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Kalmanash **teaches** a color subtractive shutter optically align with the video display

(lines 39-41 and Fig. 4).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Wong et al. the feature as taught by Kalmanash in order to provide the means for controlling the color projected by an image such that the actual color projected is consistent with the color data driving the image

10. Regarding claims 27, 28 and 29 please see the remarks presented with regard to claims 23, 24 and 25 hereinabove which apply equally to claims 27, 28 and 29 respectively.

11. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schultz taken with Fan et al in view of Schoenbeck et al. as applied to claim 19 in item 3 hereinabove, and further in view of Cooper et al. (USP 6,141,057) taken with Tsugane et al. (USP 5,045,9420.

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Schultz taken with Fan et al. in view of Schoenbeck et al. **does not teach** a computer system comprising a computer having a video output coupled to an analog to digital converter, a transmitter coupled to the analog to digital converter for sending a video signal.

Schultz taken with Fan et al. in view of Schoenbeck et al. teaches a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Cooper et al. **teaches** a system comprising multiple processors operating on video signals (col. 1, lines 47-67 and col. 2, lines 1-21); Cooper et al. further **teaches** a computer system comprising a computer having a video output coupled to an analog to digital converter.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. the feature as taught by Cooper et al. in order to put in place the means required to accept and process an analog video signal from analog to digital for further transmission as a digital signal.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Cooper et al. **does not teach** a transmitter coupled to the analog to digital converter for sending a video signal.

Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Cooper et al. teaches a computer system comprising a wrist mounted terminal housing a display and input means with monocular viewing means and remote communications means.

Tsugane et al. **teaches** a digital video communication system (col. 1, 42-67); Tsugane et al. further **teaches** a transmitter coupled to the analog to digital converter for sending a video signal (col. 2, lines 18-39).

It would have been obvious to a person of ordinary skill in the art at the time of the invention

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to provide to the device as taught by Schultz taken with Fan et al. in view of Schoenbeck et al. and further in view of Cooper et al. the feature as taught by Tsugane et al. in order to provide to the system the means for transmitting the digital video signal or further processing.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	6,029,508	Schoenbeck et al.
U. S. Patent No.	5,587,577	Schultz
U. S. Patent No.	5,408,359	Ferrett et al.
U. S. Patent No.	4,639,225	Washizuka


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Responses

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent E. Kovalick whose telephone number is 571 272-7669. The examiner can normally be reached on Monday-Thursday 7:30- 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Vincent E. Kovalick
July 13, 2005


Ricardo Osorio
PRIMARY EXAMINER